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Remarks

Receipt is acknowledged of the Office Action of January 24, 2007 in the above-captioned matter. Reconsideration of the application and all available extensions of the time provided for a response are requested. A Request for Continued Examination is enclosed. The Commissioner is hereby authorized to charge Deposit Account 50-1604 for all amounts required in connection with the present application and response.

Applicant notes that an interview at the Patent Office was requested in the Response to the last Office Action, but that no reply was received to that request. Accordingly, an interview is again requested to facilitate an allowance.

Objections to Claim 9

In the Office Action, claim 9 was objected to (in view of the fact that it inadvertently depended on itself). Further thereto, the claim has been amended to depend on claim 1 as set forth above. Reconsideration and withdrawal of the rejection is respectfully requested.

Rejections Under 35 U.S.C. §103(a)

In the Office Action, independent claims 1 and 18 (and various dependent claims thereon) were rejected under 35 U.S.C. §103(a) based on Sampson et al. (GB 2332516) in view of Nilsen et al. (U.S. Pat. No. 5,487,973). Reconsideration of the rejections is respectfully requested.

Claims 1 and 18 of the present invention are directed to a new 'one-step' hybridization

method which is not taught or suggested in Sampson or Nilsen, whether individually or in combination. Even assuming merely for the sake of argument that Sampson's circular DNA template is analogous to, or can be replaced by the dendrimer of Nilsen, neither Sampson nor Nilsen nor their combination teach or suggest the claimed methods.

In particular, Sampson does not teach a method in which the circular template is hybridized to the cDNA **and also** maintained hybridized to the cDNA while the cDNA is on the microarray. To achieve his method Sampson uses his circular template to create a repeating signal amplication sequence on the cDNA. That repeating (hairpin) sequence is covalently bound (not hybridized) to the cDNA, and it is that covalently bound sequence which is part of the molecule bound to the array. *See e.g.*, Sampson Figure 1.

The conditions under which a covalently bound sequence remains attached to a cDNA molecule are considerably different from those needed to maintain a large branched dendrimer hybridized to that cDNA. To one experienced in the art, the hybridization conditions necessary as part of an enzymatic extension reaction such as that used in Sampson are significantly less stringent than those for target hybridization to a microarray.

Accordingly, the references do not appear to teach or suggest the claimed method wherein the first component comprising cDNA reagents is simultaneously hybridized to both a microarray and to a second component comprising dendrimer, while the first component comprising cDNA is hybridized to the microarray. Claim 1 has been amended to more distinctly and particularly recite this simultaneous requirement.

A similar requirement is likewise present in claim 18. Claim 18 requires that pre-hybridization be conducted of the cDNA and the dendrimer, with that prehybridized complex being applied to the microarray. Accordingly, the complex on the microarray includes a cDNA simultaneously hybridized to the dendrimer and to the microarray (which beneficially eliminates a full step of overnight hybridization). As discussed above, this feature is not taught or suggested by the Sampson and/or Nilsen references. Accordingly, withdrawal of the rejection is respectfully requested.

In the Office Action, claims 27-34 with respect to the dual and multiple channel embodiments[1] of the invention were rejected over Sampson in view of Nilsen and Brenner et al. (U.S. Pat. No. 5,846,719). Reconsideration is requested.

It is respectfully submitted that the referenced Sampson cite has no bearing or teaching on the claimed invention. In that cite (p. 10, lines 6-9), Sampson's reference to fluorescent moieties simply appears to describe the commonly known use of such molecules in the art as label molecules. Likewise, Brenner's use of tags appears to be different from the method of the present invention.

To more distinctly and particularly claim the subject matter of the invention, the claims have been amended as set forth above to recite the use of reverse transcription of two (or more) capture sequences. The cited references do not appear to teach or suggest multiple reverse transcription

[1] With respect to the priority issues, applicant respectfully defers any analysis of those issues, without agreeing with the Examiner's comments thereon, pending any indication of how those comments impact upon the pending rejections. In the event that the asserted priority issues have some impact upon the pending rejections, clarification is respectfully requested so that any relevant issues can be addressed.

reactions of separate capture sequences producing two (or more) channels of analysis. This is significantly beneficial in the present invention as each capture sequence can be labeled using a different dye, providing additional simultaneity in the present method. Yet further efficiency is provided via the conduct and analysis of separately labeled experiments which can be conducted simultaneously.

Claims 3-4, 16-17, and 23-26 to removal of RT primer were rejected over Sampson in view of Nilsen and Combates (U.S. Pat. No. 6,045,998). Reconsideration is requested.

Combates appears to involve a removal of primer that was necessary before subsequent amplification using a polymerase. As the claims in question do not relate to a method requiring amplification with a polymerase, it is unclear why one or ordinary skill would randomly search for and take this teaching from Combates and use it herein. Accordingly, withdrawal of the rejection is respectfully requested.

Applicant also maintains its request that the provisional double patenting rejections be withdrawn for the reasons set forth in the prior Office Action, or at minimum that they be held in abeyance until arrival at agreement on allowable subject matter.

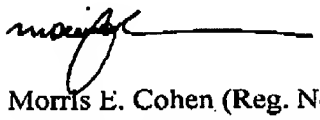
In the event that the Examiner is inclined to further maintain any of the rejections or issue any new ones, an interview at the Patent Office is again requested.

Accordingly, favorable action on the claims is respectfully requested as further discussed above.

Application of Robert Getts
Serial No. 09/802,162 filed 3/8/2001
Response of 8/27/07 to Office Action of 1/24/07

Dated: August 27, 2007

Respectfully submitted,



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